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EXAMINER				
STOKELY-COLLINS, JASMINE N				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/625,712

Applicant(s)

SZUCS ET AL.

Examiner

JASMINE STOKELY-COLLINS

Art Unit

2423

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27, 30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27, 30-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 9/15/2008 have been fully considered but they are not persuasive.
2. Applicant argues in his remarks, on page 10, that Wang in view of Ceulaer does not teach an interface for connecting network devices to an MHP terminal device, where the network devices send MHP applications at the MHP terminal device via the network. The examiner disagrees; Wang teaches a DTV connected to a network of devices, where devices send device information to the DTV for controlling said devices. The information sent by these devices are used for creating a user interface displayed by the DTV (abstract). Ceulaer teaches a television with MHP capabilities integrated into it, which has the capability of running an MHP graphical user interface. When the MHP capabilities taught by Ceulaer are integrated into the DTV taught by Wang, the combination results in an MHP receiving device which is connected to a network of devices, in which control information is transmitted by those devices to the MHP television for control GUIs. Ceulaer teaches the GUIs being implemented using MHP, and therefore it would be obvious to transmit MHP compatible device control code to the MHP television.
3. Furthermore, applicant argues on page 11 that Wang in view of Ceulaer does not teach the device is capable of handling both a broadcast transport stream and a local network stream. The examiner disagrees; The local network stream is clearly received by Wang's DTV, as that is the crux of his invention. The DTV is also capable of

receiving broadcast streams, as indicated by its connection to the satellite broadcasting network (col. 7 ll. 10-17). The DTV's connection to the local network does not destroy its ability to receive broadcasting, as that is the purpose of a digital television receiver. Wang's DTV can clearly receive both broadcast transmissions and transmissions from network devices.

4. Regarding claim 2, applicant argues that Soepenbergs, when combined with Wang and Ceulaer would not lead to implementation of MPEG-2 MHP applications embedded in a local network transport stream. The examiner disagrees; Soepenbergs teaches sending MHP applications using MPEG-2. Wang's 1394 network supports MPEG-2, therefore there is no need to explore alternative transport mechanism when the well know and widely used MPEG-2 standard will suffice. A person of ordinary skill in the art would recognize that although Soepenbergs broadcasts his MHP applications, the applications could be transported over a local network using MPEG-2 also.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 30-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 30 claims a computer readable storage medium embodying functional descriptive material. However, the claim does not define a computer

readable storage means to be a memory/disk and is thus non-statutory for that reason (i.e. "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized"). A "medium" can be intangible (i.e. a signal which carries/stores computer readable instructions)

However, the specification (at page 4, lines 8-12) indicates – "a MHP application is stored that is intended to be used for remotely accessing and controlling the network device from a MHP terminal device. The MHP application can be transmitted via local network..." Therefore, the specification defines the computer readable storage means to be a signal.

A "signal" embodying functional descriptive material is neither a process ("actions"), nor machine, nor manufacture, nor composition of matter (i.e. a tangible "thing") and therefore does not fall within one of the four statutory categories of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory, under the present USPTO Interim Guidelines, 1300 Official Gazette Patent and Trademark Office 142 (Nov. 22, 2005).

Claim 31 claims a computer program product, which is neither a process ("actions"), nor machine, nor manufacture, nor composition of matter (i.e. a tangible "thing") and therefore does not fall within one of the four statutory categories of § 101. The claimed computer program product is functional descriptive material and its functionality cannot be realized because it is not recorded on an appropriate, tangible computer-readable medium. A "product" can be intangible, such as a signal transmitting a service. The specification (at page 4, lines 8-12) indicates – "a MHP application is stored that is intended to be used for remotely accessing and controlling the network device from a MHP terminal device. The MHP application can be transmitted via local network..." Therefore, the specification defines a signal as a product having computer readable instructions therein, and the full scope of the claim includes signals.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole in non-statutory, under the present USPTO Interim Guidelines, 1300 Official Gazette Patent and Trademark Office 142 (Nov. 22, 2005).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6-15, 17-19, 22-23, 25-27, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 7,200,683 B1) in view of Ceulaer et al (US 2002/0047860 A1).

Regarding claim 1, Wang teaches a terminal device (figure 2 element 102: DTV) comprising
a broadcast interface for receiving a broadcast transport stream (column 7 lines 10-17 teach a DSS network interface unit for receiving satellite broadcasts, which could then be sent to the DTV. Column 8 lines 8-12 disclose the client-server relationship between the DTV and DSS);
a local network interface (1394 serial bus) for connecting said terminal device to a local network (column 7 lines 10-17, figure 2), and for receiving local network transport streams emanating from other network device connected to said local network (column 8 lines 63-67),
so that local network applications (e.g. GUI) to be launched at said terminal device are transmitted within said local network transport streams and are received via said local network interface (column 8 line 67- column 9 line 5).

Wang does not teach the terminal device is an MHP device, that MHP applications are being sent through the broadcast stream, or user interface resources according to the MHP standard.

Ceulaer discloses an MHP set-top box (MHP terminal device) and integrated television set (page 1 section 0004) which is analogous to Wang's

DSS network interface unit and DTV, wherein MHP applications are sent through broadcast streams (page 1 section 0004, page 5 section 0091 where services are defined as applications in page 5 section 0101). Furthermore, it is standard practice for MHP applications to be sent through broadcast streams, as admitted by applicant in page 1 lines 18-19 of the applicant's specification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter Wang's DSS-NIU and DTV to incorporate the MHP capabilities of Ceulaer's MHP set-top box and television set for the benefit of integrating MHP technology into the network that would allow interactivity.

Ceulaer also teaches a GUI can be implemented as an MHP application to run on the MHP television device (pg. 1 sect. 0011). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the control GUIs taught by Wang as MHP GUIs for the benefit of allowing the GUIs to be run on the MHP layer of the MHP television device taught by Wang in view of Ceulaer.

Regarding claim 6, Wang further teaches that at said terminal device, the received application byte code of said local network applications is passed to a layer, whereby an underlying transport protocol used on said local network is hidden from said MHP layer (column 6 lines 21-35).

Regarding claim 7, Wang further teaches that said local network is a IEEE 1394 network, a wireless LAN, a wired LAN, a wired or wireless IP network, or any other kind of local network (column 4 line 65 - column 5 line 10).

Regarding claim 8 Wang further teaches that on said local network, any kind of middleware is used for exchanging messages and/or commands (column 7 lines 46-62).

Regarding claim 9, Wang in view of Ceulaer teaches the MHP terminal device of claim 1. Wang further teaches a graphical user interface resources, display means, and user input means that enable a user to interact with said local network MHP applications (column 8 lines 35-54) and with said broadcast MHP applications.

Wang further teaches a graphical user interface resources, display means, and user input means that enable a user to interact with said broadcast MHP applications (page 1 section 0008).

Regarding claim 10, see analysis of claim 9.

Regarding claim 11, Wang further teaches that at said MHP terminal device, a graphical user interface is updated in order to show the availability of

said local network MHP applications and/or of said other network devices
(column 8 line 56- column 9 line 5).

Regarding claim 12, Wang further teaches said local network MHP application is an application for remotely accessing and/or controlling the respective network device from which said local network MHP application has been received (column 5 lines 33-48, column 6 lines 47-50).

Regarding claim 13, Wang further teaches remote access and remote control are effected by transmitting commands from the MHP terminal via the local network to the respective network device (column 8 lines 55 - column 9 line 8).

Regarding claim 14, Wang further teaches said other network devices comprise at least one of a NCAM, an AV content server (column 6 lines 2-3), a transcoder, a DVB recorder, a home automation server, or any other kind of network device (column 5 lines 7-10).

Regarding claim 15, Wang teaches a network device (DVCR), characterized by storage means for storing local network applications (10), or a means to generate such MHP applications (figure 4b element 202), that are to be transmitted to a terminal device (DTV),

a local network interface (1394 serial bus) for connecting said network device to a local network, and for transmitting a local network transport stream to said terminal device, wherein local network applications (GUI) to be launched at said terminal device are transmitted within said local network transport stream (column 4 line 65 – column 5 line 21), and the use of "multiplexing means for multiplexing said local network MHP application (10) into said local network transport stream" is implied by column 4 lines 65-67 –The 1394 serial bus supports both time-multiplexed audio/video (A/V) stream and standard IP communications --.

Wang does not disclose the use of MHP technology, or user interface resources according to the MHP standard. De Ceulaer teaches the use of MHP technology as well as GUIs implemented according to the MHP standard, as explained in the analysis of claim 1.

Regarding claim 17, see analysis of claim 9.

Regarding claim 18, see analysis of claim 12.

Regarding claim 19, see analysis of claim 13.

Regarding claim 22, see analysis of claims 1 and 15.

Regarding claim 23, see analysis of claim 1.

Regarding claim 25, see analysis of claim 1.

Regarding claim 26, see analysis of claim 6.

Regarding claim 27, see analysis of claim 9.

Regarding claim 30, Wang teaches a computer readable medium having computer readable instructions stored thereon (column 6 line 59-column 7 line 2 discloses software for the 1394 bus, which handles transport) that when executed by a processor performs steps comprising:

transmitting a local network application together with a local network transport stream from said network device (column 8 lines 63- column 9 line 8 where transmitting an HTML GUI shows the capability to transport an application as a GUI written in HTML can have an embedded JAVA applet, giving the GUI the necessary functionality to qualify it as an application),

launching said local network application at said terminal device (column 8 line 67- column 9 line 5); and

transmitting commands and/or messages via said local network to said network device in order to remotely access and/or control said network device (column 8 lines 55-63).

Wang does not teach the terminal device is an MHP device, that MHP applications are being sent through the broadcast stream, or user interface resources according to the MHP standard.

Ceulaer discloses an MHP set-top box (MHP terminal device) and integrated television set (page 1 section 0004) which is analogous to Wang's DSS network interface unit and DTV, wherein MHP applications are sent through broadcast streams (page 1 section 0004, page 5 section 0091 where services are defined as applications in page 5 section 0101). Furthermore, it is standard practice for MHP applications to be sent through broadcast streams, as admitted by applicant in page 1 lines 18-19 of the applicant's specification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter Wang's DSS-NIU and DTV to incorporate the MHP capabilities of Ceulaer's MHP set-top box and television set for the benefit of integrating MHP technology into the network that would allow interactivity.

Ceulaer also teaches a GUI can be implemented as an MHP application to run on the MHP television device (pg. 1 sect. 0011). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the control GUIs taught by Wang as MHP GUIs for the benefit of allowing the

GUIs to be run on the MHP layer of the MHP television device taught by Wang in view of Ceulaer.

Regarding claim 31, Wang teaches a computer program product (application software, column 8 line 63-column 9 line 8) having computer readable instructions therein, that when executed by a processor implement an apparatus comprising:

means for transmitting a local network application together with a local network transport stream from a network device to a terminal device (column 8 line 63-column 9 line 5);

means for launching said local network application at said terminal device (column 8 lines 55-63 disclose that the GUI runs on the terminal device.

Furthermore, Wang's DTV modified to be an MHP TV, as taught by Ceulaer, has the capabilities to run applications. The combination of these two teachings would result in any applications transmitted to a terminal device launching on the terminal device just as the GUI is launched in Wang's terminal device); and means for transmitting commands and/or messages via said local network to said network device in order to remotely access and/or control said network device (column 8 line 57-column 9 line 8).

Wang does not teach the terminal device is an MHP device, that MHP applications are being sent through the broadcast stream, or user interface resources according to the MHP standard.

Ceulaer discloses an MHP set-top box (MHP terminal device) and integrated television set (page 1 section 0004) which is analogous to Wang's DSS network interface unit and DTV, wherein MHP applications are sent through broadcast streams (page 1 section 0004, page 5 section 0091 where services are defined as applications in page 5 section 0101). Furthermore, it is standard practice for MHP applications to be sent through broadcast streams, as admitted by applicant in page 1 lines 18-19 of the applicant's specification. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter Wang's DSS-NIU and DTV to incorporate the MHP capabilities of Ceulaer's MHP set-top box and television set for the benefit of integrating MHP technology into the network that would allow interactivity.

Ceulaer also teaches a GUI can be implemented as an MHP application to run on the MHP television device (pg. 1 sect. 0011). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the control GUIs taught by Wang as MHP GUIs for the benefit of allowing the GUIs to be run on the MHP layer of the MHP television device taught by Wang in view of Ceulaer.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 7,200,683 B1) in view of Ceulaer et al (US 2002/0047860 A1), and further in view of Soepenbergh et al (US 2002/0059645 A1).

Regarding claim 2, Wang in view of Ceulaer teaches an MHP terminal device according to claim 1, characterized in that said local network transport stream comprises at least one of AV data, program specific information, MHP application byte code, service information (column 8 line 63 – column 9 line 8).

Wang in view of Ceulaer does not teach said local network transport stream is a data stream according to the MPEG-2 standard.

Soepenbergh teaches sending applications in a MPEG-2 transport stream (page 1 section 0003). Soepenbergh further discloses that the features of his disclosure can be used in an MHP environment (page 3 section 0038). It would have been obvious to one of ordinary skill on the art at the time the invention was made to send the MHP applications of Wang in view of Ceulaer in MPEG-2 format, as taught by Soepenbergh, for the benefit of being able to use interlacing, which would reduce bandwidth and therefore reduce cost.

5. Claims 3-5, 16, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 7,200,683 B1) in view of Ceulaer et al (US 2002/0047860 A1), and further in view of ETSI TS 101 812 V1.1.1, *Digital Video Broadcasting Multimedia Home Platform Specification 1.0*.

Regarding claim 3, Wang in view of Ceulaer teaches an MHP terminal device according to claim 1.

Wang in view of Ceulaer does not disclose that said terminal device is characterized by a resident application that monitors both said broadcast interface and said local network interface in order to detect MHP applications transmitted within said broadcast transport stream or within said local network transport stream, and that initiates a loading of said MHP applications.

Page 49 section 9.1.2 of ETSI's MHP specification discloses that the MHP terminal device shall monitor signaling for changes in applications, including the termination or addition of new applications. Additionally, ETSI teaches the terminal device launching said applications both automatically and explicitly. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of the ETSI MHP specification with the teachings of Wang in view of Ceulaer for the benefit of having an interface to receive and start applications.

Regarding claim 4, Wang in view of Ceulaer teaches an MHP terminal device according to claim 1.

Wang in view of Ceulaer does not disclose that said terminal device is characterized by an application manager running on said MHP terminal device that is responsible for download, maintenance, and life-cycle management of both said broadcast MHP applications and said local network MHP applications.

ETSI'S MHP specification teaches an application manager in the system software that manages the life-cycle of all applications (page 33 section 5.2.2.1).

Page 49 section 9.1.2 discloses downloading and maintenance of applications. Page 51, section 9.2.2, second paragraph discloses that the application manager is resident on the system. . It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of the ETSI MHP specification with the teachings of Wang in view of Ceulaer for the benefit of having an interface to begin, end, update, and otherwise manage the MHP applications.

Regarding claim 5, Wang in view of Ceulaer and ETSI teaches an MHP terminal device according to claim 4. ETSI further teaches that said application manager maintains an application database in which each downloaded MHP application is registered (page 469 AppsDatabase).

Regarding claim 16, Wang in view of Ceulaer teaches a network device according to claim 15.

Wang in view of Ceulaer does not teach an object carousel generator for segmenting said local network MHP applications into a set of data packets, and for repeatedly transmitting said set of data packets.

ETSI teaches the use of object carousels (Annex B). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the object carousel of the ETSI MHP specification with the network

device taught by Wang in view of Ceulaer for the benefit of having a transport protocol for said MHP applications.

Regarding claim 24, see analysis of claim 3.

6. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 7,200,683 B1) in view of Ceulaer et al (US 2002/0047860 A1), and further in view of Woodruff (US 2003/0046592 A1).

Regarding claim 20, Wang in view of Ceulaer teaches a network device according to claim 15.

Wang in view of Ceulaer does not teach said network device is embedded in said MHP terminal device itself.

Woodruff discloses a network device (PVR) incorporated into a digital television (page 2 section 0036). It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the DTV taught by Wang in view of Ceulaer to include an imbedded recording device, as taught by Woodruff, for the benefit of having recording capabilities without having to house an additional physical device within the network. Fewer devices make the network more compact.

Regarding claim 21, see analysis of claim 20. A PVR employs the same functionality as a DVB recorder.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASMINE STOKELY-COLLINS whose telephone number is (571) 270-3459. The examiner can normally be reached on M-Th 9:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on (571) 272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jasmine Stokely-Collins/
Examiner, Art Unit 2423

/Andrew Y Koenig/
Supervisory Patent Examiner, Art Unit 2423

